CONFERENCE OF THE EIGHTEEN-NATION COMMITTEE ON DISARMAMENT

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FINAL VERBATIM RECORD OF THE FOUR HUNDRED AND FIFTEENTH MEETING

held at the Palais des Nations, Geneva,
on Friday, 23 May 1969, at 10 a.m.

Chairman: Mr. A. ZELLEKE (Ethiopia)

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PRESENT AT THE TABLE

Brazil:	Mr. S.A. FRAZAO
	Mr. C.A. de SOUZA e SILVA
	Mr. L.F. PALMEIRA LAMPREIA
Bulgaria:	Mr. K. CHRISTOV
	Mr. M. KARASSIMEONOV
	Mr. I. PEINIRDJIEV
Burma:	U KYAW MIN
Canada:	Mr. G. IGNATIEFF
	Mr. J.R. MORDEN
Czechoslovakia:	Mr. T. LAHODA
	Mr. V. SAFAR
	Mr. J. STRUCKA
Ethiopia:	Mr. A. ZELLEKE
India:	Mr. M.A. HUSAIN
	Mr. N. KRISHNAN
	Mr. K.P. JAIN
Italy:	Mr. R. CARACCIOLO
	Mr. F. LUCIOLI OTTIERI
	Mr. R. BORSARELLI
	Mr. U. PESTALOZZA
Mexico:	Miss E. AGUIRRE
	Mr. H. CARDENAS RODRIGUEZ
Nigeria:	Alhaji SULE KOLO
	Mr. C.O. HOLLIST
	Mr. L.A. MALIKI

Poland:	Mr. K. ZYBYLSKI
	Mr. H. STEPOSZ
	Mr. R. WLAZLO
Romania:	Mr. N. ECOBESCO
	Mr. V. CONSTANTINESCO
	Mr. V. TARZIORJ
	Mr. C. GEORGESCO
Sweden:	Mrs. A. MYRDAL
	Mr. A. EDELSTAM
	Mr. U. ERICSSON
	Mr. R. BOMAN
Union of Soviet Socialist Republics:	Mr. A.A. ROSHCHIN
	Mr. O.A. GRINEVSKY
	Mr. I.I. TCHEPROV
	Mr. N.S. KISHILOV
United Arab Republic:	Mr. H. KHALLAF
	Mr. O. SIRRY
	Mr. E.S. El REEDY
	Mr. Y. RIZK
United Kingdom:	Mr. I.F. PORTER
	Mr. W.N. HILLIER-FRY
United States of America:	Mr. A.S. FISHER
	Mr. C. GLEYSTEEN
	Mr. W. GIVAN
	Mr. R.L. McCORMACK
Special Representative of the Secretary-General:	Mr. D. PROTITCH
Deputy Special Representative of the Secretary-General:	Mr. W. EPSTEIN

1. The CHAIRMAN (Ethiopia): I declare open the 415th plenary meeting of the Conference of the Eighteen-Nation Committee on Disarmament.

2. Mrs. MYRDAL (Sweden): At this last meeting of the Committee before the recess I am grateful to have the opportunity to summarize and underline once again the views of my delegation on the test ban issue, to try to answer some of the queries which have been raised by other delegations in regard to the contents of the working paper put forward by the Swedish delegation on 1 April and contained in document ENDC/242 and, finally, in my turn to pose one or two questions in the hope that they will be answered after the recess.

3. Before doing so I should like, however, to state that although the Swedish delegation has come to, as it were, "specialize" on the test ban, we also attach great importance to the cut-off of production of fissionable materials for weapons purposes. We have long considered the test ban, the cut-off and the non-proliferation Treaty (ENDC/226*) as parts of one and the same parcel, as they would assure qualitative and quantitative freezes on nuclear weapons development. The intervention on the cut-off made in the Committee by the representative of the United States, Ambassador Fisher, on 8 April (ENDC/PV.401, paras. 50-217) was of great interest. Particularly gratifying, of course, was his suggestion that the verification of a cut-off agreement should be handled in the same manner as is prescribed in the non-proliferation Treaty, namely through reliance entirely on the safeguards system of the International Atomic Energy Agency (IAEA). This would mean in practice -- as was also pointed out by Mr. Fisher -- that a system of safeguards would come into effect which would be equal for all States signatories to the two treaties -- the cut-off treaty and the non-proliferation Treaty -- and which would cover the production of fissionable materials of all those countries.

4. In an intervention on 10 April, the representative of the Soviet Union commented on the cut-off in a rather negative way. Ambassador Roshchin said:

> "... this proposal would not lead to the reduction of existing arsenals of nuclear weapons and would not diminish the possibility of the further production of such weapons." (ENDC/PV.402, para. 77)

He added that

> "it would not solve the problem of eliminating or reducing the threat of a nuclear war, even if all nuclear Powers agreed to carry out this measure." (ibid.)

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5. That argumentation against a cut-off agreement does not seem very convincing to my delegation. As has already been pointed out in this Committee, all the measures in the nuclear weapons field discussed so far are concerned with "freezing" the existing situation in order to stop the nuclear arms race. When such a freeze or de-escalation has been achieved, the next steps can be taken on firm ground, steps towards measures of real disarmament, towards cutting down and eventually eliminating existing stocks of nuclear weapons.

6. The time now seems over-ripe for the thorough preparation of agreements both on a cut-off and on a test ban, as those two measures are so closely connected with the first attempt to begin reducing nuclear weapons installations -- that is, with the planned strategic arms limitation talks. Yes, those two treaties which we in the Eighteen-Nation Committee could and should now elaborate would serve as supporting pillars to a strategic arms limitation agreement. As a matter of sheer logic, if strategic arms are to be cut down, the need for producing material for nuclear weapons and for testing new ones will obviously be reduced.

7. I wish to propose, therefore, that the Committee, as soon as we resume work after the recess, should take a new look at the cut-off. As has been done on the test-ban issue, some delegation in our midst ought to present a working paper containing suitable language for a treaty text. Only in such a way, I think, can our further discussion become really concrete and, we hope, conclusive.

8. The United States delegation has coupled its declared willingness to enter such a treaty with an offer to make available for peaceful purposes considerable quantities of fissionable materials. I presume that these materials would be put at the disposal of other States also, and particularly the less-developed ones. This generous gesture gives added weight to the proposed cut-off and to its urgency.

9. May I be allowed to point to the challenging feature running through several of the disarmament measures on our present agenda (ENDC/236, p.3), namely, that they foster new hopes for a more international sharing of technological benefits. As with the resources of the sea-bed, so it is with those to be released by peaceful nuclear explosions and that atomic energy which is now embedded in non-profitable nuclear weapons. Particularly for the sake of the underdeveloped countries, these hopes must not prove to be illusions.

10. Let me now turn to the test-ban issue. Practically all other delegations have by now made comments on our working paper. We are grateful for the support which has

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been lent both to our initiative in submitting this paper and to most of its contents. It is my intention today to try to answer some of the questions and comment on some of the ideas raised by other delegations.

11. It has been customary to treat the test ban issue as divided between a scientific or technical aspect and a political aspect. But we have found that this terminology lacks precision, a fact which may be the cause of some misunderstanding. It is more accurate to state that each of those terms refers to two different situations. It is therefore more helpful to separate what are called the technical aspects in the following way: first -- those of method -- what kind of bases it would be scientifically possible to utilize, and second, which of these capabilities have practical applicability within the institutional system existing today. Also, the political decisions will be addressed, on the one hand, to the steps for the practical arrangements -- installations, data exchange, and so on -- which are needed for improved application of the technically available methods; and, on the other hand, to the overriding political decision to sign or not to sign a treaty, necessarily coupled with national decisions to stop or not to stop testing. While it is the task of scientists to continue to study control methods, and to select those which best meet the requirements of governments, it must be for the governments to state clearly what degree of precision is needed, what deterrence level would be considered satisfactory, and so on. It is also a scientific or rather a technical job to blueprint the installations required to apply the verification methods in practice, but it is certainly the task of governments to decide on such practical arrangements.

12. I shall try to employ that kind of distinction to make some points clearer than in our intervention on 1 April (ENDC/PV.399, paras. 7 et seq.); that is, technically possible methods to be kept separate from methods which are practical at present, and political decisions relating on the one hand to the extension of practical capabilities and on the other to the major issue of agreeing on a disarmament measure.

13. The first representative to make detailed comments on our working paper and on my intervention of 1 April was the representative of the United States, Ambassador Fisher. Mr. Fisher said that:

> "The United States cannot accept the statement advanced in support of the recent Swedish working paper that there will be less than one ambiguous event, or 'false alarm', in the Soviet Union every ten years".
> (ENDC/PV.401, para. 22)

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Mr. Fisher went on to say that it was the assessment of his delegation that

"there will be a large number of events each year which cannot be distinguished between earthquakes and underground nuclear explosions". (ibid.)

14. If we refer to the situation of today, Mr. Fisher is certainly right. Everybody knows that there is a considerable number of nuclear events in the so-called magnitude gap, between 4.0 and 4.5, with explosions extending from one to some tens of kilotons -- 20 or 40 or 60, dependent on whether they occur in hard rock or softer environments. But the future possibilities are quite different. The Swedish delegation has made one attempt to circumscribe those future possibilities which could form a stable platform for a test ban.

15. In our interventions in 1967 and in the working paper of that year (ENDC/191) we described how decision theory can be employed to design rather effective ways of using certain kinds of seismological observations for test ban control, both in the case -- much discussed already at that time -- of a treaty with obligatory on-site inspections and also in the case -- not very much investigated at that time -- of a treaty without obligatory inspections.

16. There would be two stages of control in both kinds of treaty. In the first stage decision theory principles, or perhaps some other principles, would be used to select from all observations violation-like events, and in the second stage treaty procedure would be employed to get clarification or to verify whether they really were violations or not. I shall assume that what Mr. Fisher called "ambiguous events" or "false alarms" are these selected events. In our terminology they are violation-like events and consist, as the case might be, of real violations and of earthquakes mistaken as explosions and thus being potential false alarms. Decision theory routinely arranges the selection process so that the percentage of violations separated for verification is high enough to provide a sufficient deterrence and at the same time so that the rate of false alarms is held down to an acceptable level. Details about such employment of decision theory are to be found in document ENDC/191 and in a subsequent report from the Research Institute of National Defence in Stockholm, entitled "Seismological Test Ban Control", of February 1968.

17. Let us now examine the second stage -- and to begin with, in the case of a treaty with obligatory inspections. There the verification procedure would consist of the performance of a certain number of on-site inspections, each with a certain practical effectiveness, less than perfect but good enough to provide the required deterrence -- in our numerical calculations we chose to estimate effectiveness of inspections at 50

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per cent. The potentially false alarms would then be cleared up through the inspections and an accusation of breach of treaty would be made only if conclusive evidence of a nuclear explosion was found or, more realistically, I think, if the performance of proper on-site inspection had been refused or obstructed.

18. In the case of a treaty without obligatory inspection, this described verification by obligatory inspection would, of course, not be available. In our intervention on 1 April and in document ENDC/242 we therefore proposed an alternative treaty procedure to handle this verification problem, namely the so-called verification by challenge. Our proposal was based on several notions. One of them was that "false alarms" can be made to be rare events if identification capabilities are developed as suggested by us. The effort which a suspected party would want to make to free itself on such rare occasions would thus not constitute a very heavy burden on the treaty parties. Another of our notions was that the treaty procedure suggested by us would, on the basis of the improved identification capabilities I just mentioned, be efficient enough to maintain the required deterrent against violations. Both those notions have been challenged by the United States representative and I now want to try to "free" myself.

19. First, I turn to the point about the low rate of false alarms. Here it is necessary to keep the distinction I indicated between possible method and practical application. Our notion of the feasibility of fewer false alarms than one every ten years rests originally on our 1967 application of decision theory to the particular identification method described in 1964 by Brooker and Mitronovas, which is a method of identification over regional distances and based on data going rather far down into the magnitude gap. This was at that time a very encouraging methodological result from United States measuring stations in a regional network around United States explosions and earthquakes, that is, not relying on teleseismic observations. Whether something like that will be applicable also to other regions, including those of particular interest to the United States, will certainly depend on the practical arrangements provided in a treaty situation, and this is largely a matter for political decision. In my intervention on 1 April, I therefore stressed the importance of organizing data exchange and establishing automatic stations for the extraction of regional data (ENDC/PV.399, paras. 31 and 32). Both arrangements would be particular instances of practical applications of methods which are available in principle.

20. Of course, the whole situation would be eased if such low false alarm rates were to be attainable by teleseismic means. At present such monitoring of the numerous weak events, in the lower magnitude ranges, does not seem to be available. This is

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therefore a problem still unsolved, where improvements both of identification methods and of practical arrangements for measurements are necessary. Here the large teleseismic array stations, particularly when placed in different regions of the world, seem to offer the best possibilities for progress.

21. In passing, let me say that I am afraid that the representative of the United States in his intervention on 8 April (ENDC/PV.401, para. 21) overestimated the coverage of identification capabilities by last year's report on seismic verification of the Seismic Study Group of the International Institute for Peace and Conflict Research of Sweden (SIPRI)(ENDC/230). The SIPRI meeting actually did not take the capabilities of large arrays into account for the important conclusions. This remains to be done and we would value highly another experts' meeting doing so.

22. A very profound change in the identification capabilities, which was not dealt with in Mr. Fisher's critical intervention, would be brought about by the organized international exchange of seismological data which we have mentioned in article 11, paragraph 2 of our suggested treaty text (ENDC/242). I referred to this measure in my speech on 1 April as promising a considerable improvement in comparison with present control capabilities (ENDC/PV.399, para. 32). At the same time I mentioned other improvements which could be derived from seismological stations of a classical type, properly located (ibid., para. 28). They might be made automatic and sealed, and should be linked up with the international network of data exchange.

23. Several other representatives have taken up the matter of seismological data exchange in their recent statements. I feel that I have to pay a special tribute to the representative of Canada, Ambassador Ignatieff, for his very efficient promotion of immediate steps towards an effective data exchange (ENDC/PV.404, paras. 78-90), and now again in the working paper submitted today (ENDC/251).

24. Mr. Ignatieff pointed out, as other representatives have done, that the task of identification would be facilitated if guaranteed access to all original seismological data were to be provided. For the investigation of certain particular events, data from a few dozen up to perhaps a few hundred records would be important. The problem was therefore, he said "to devise a system by which their availability could be guaranteed within an acceptable and practicable interval of time" (ENDC/PV.404, para. 83). He suggested, as a possible arrangement, governmental guarantees to supply tape records or microfilms, with supporting background technical information, upon the demand of any requesting government within an agreed time interval (ibid., para. 84) That is precisely what has been discussed as very desirable among experts from eight

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governments -- among them Sweden and Canada -- which for the last couple of years have been concerned with bringing about the so-called "detection club". Mr. Ignatieff has made several very interesting suggestions in regard to the organizational problems involved in setting up the international data exchange. We want to support warmly such an activation of international co-operation in the seismic detection and identification fields.

25. The representative of the United Kingdom, Mr. Mullay, was, of course, right in drawing our attention in his intervention on 17 April (ibid., para. 13) to the fact that several international seismic data centres already exist, such as the ones in Edinburgh, Washington and Moscow. But they are not as yet functioning as needed in relation to a test ban.

26. Before him, on 10 April, the representative of Ethiopia, Mr. Zelleke, spoke of the need for further research in the seismological field and stressed the idea of a joint international effort to this effect (ENDC/PV. 402, para. 103).

27. These suggestions were commented upon by the representative of Czechoslovakia, Mr. Lahoda, in his interesting intervention in the Committee on the test-ban issue on 29 April (ENDC/PV.407, paras. 8-10). He felt, however, that the right time to consider them would be after reasonable progress had been achieved on the crux of the problem, namely, the question of the political willingness to stop testing. We beg to differ just on this point of timing. The structure of the test ban has to be established now and the technical services needed, not least the data exchange, have to begin to be organized now.

28. International co-operation for providing a data flow, however, obviously does not have technical aspects alone. Governments must be willing to decide to participate. In this connexion, I wish to add our appreciation to that already expressed by others, of the recent statements by the representatives of two of the nuclear-weapon Powers, the Soviet Union, indicating its willingness to take part in an organized exchange of national seismological data as part of a comprehensive test ban (ENDC/PV.402, para. 72) and the United Kingdom (ENDC/PV.396, para. 27) stressing its readiness to take an active part in establishing such a system. United States representatives have on earlier occasions expressed the same willingness, but it would be of great value if this standpoint could be reiterated at this stage of our negotiations. I shall return somewhat later to the question of how soon specific work for this purpose might be initiated.

29. In view of the many constructive suggestions made in regard to international co-operation in the exchange of seismic data, I venture strongly to recommend that in

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our report to the General Assembly of the United Nations this matter should be more than briefly mentioned. It marks considerable progress towards laying the foundation for a comprehensive test ban treaty, and ought to be made visible to all United Nations delegations.

30. I shall now try to answer some of the queries which have been raised in connexion with the treaty draft contained in the Swedish working paper. The general measure of support that our ideas have obtained so far is quite encouraging.

31. Representatives have dealt mainly with one or two crucial provisions of our text rendered in articles I and II and I shall do the same today.

32. Article I, paragraph 1 contains the prohibition against all underground nuclear weapon test explosions. Paragraph 2 ensures the prohibition against collaboration with any third party for the carrying out of such explosions. The contents of both those provisions are identical with corresponding provisions of the partial test-ban Treaty (ENDC/100/Rev.1). No objection has been raised in the Committee against them. On the contrary, this complete prohibition of underground nuclear tests has been greeted with appreciation by some representatives, for instance, by the representative of Czechoslovakia on 29 April (ENDC/PV.407, para.6). It is, of course, the very core of a comprehensive test ban. But if we are to satisfy the newly awakened demand for using nuclear explosions for peaceful purposes, an exception from the general rpohibitory rule must be made for them. Paragraph 3 of article I provides for that exception, namely, if such explosions are made to take place "in conformity with an international agreement to be negotiated separately".

33. In this connexion I wish to quote the representative of Brazil, Ambassador Frazão, who said on 8 May:

> "We consider that the working paper presented by the Swedish delegation deals with the question of peaceful nuclear explosions in a logical and well-balanced manner: it sets forth the general and universal rule of the prohibition that is applicable to all countries, whether nuclear or non-nuclear, without any loopholes, and leaves the question of the regulation of nuclear explosions for peaceful purposes -- which must be negotiated separately in another context -- to be the subject of a special international agreement." (ENDC/PV.409, para.12)

34. The representative of the United Arab Republic, Ambassador Khallaf, in his intervention on 15 April reminded us of the obvious link between the provision in our suggested article I, paragraph 3 and the one in article V of the non-proliferation

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Treaty, also dealing with the subject of peaceful nuclear explosions. He said in that connexion: "We believe that it is self-evident that this important subject should receive identical treatment in both these treaties". (ENDC/PV.403, para. 26) My answer is that there should not be, and there is not, any contradiction between the two provisions.

35. Mr. Mulley, in his speech on 17 April, touched on the same question when he asked if the international agreement mentioned in paragraph 3 of our article I was envisaged as being the same as that referred to in article V of the non-proliferation Treaty ENDC/PV.404, para. 10). Again, my answer is positive: it is intended to be one and the same "special international agreement", as it is to legislate the international regulations relating to the same nuclear explosions for peaceful purposes. But let me be quite clear: the special agreement will have to be negotiated quite soon. If only the non-proliferation Treaty is then in existence, the coverage of the provisions about control might not be total, that is, explosions in the territories of nuclear-weapon Powers would not then need to be covered. On this point one would, of course, have to study more closely the suggestions made yesterday by the representative of Italy (ENDC/PV.414, paras. 34 et seq.)

36. But a further step will be indicated in the context of the comprehensive test ban, when not only explosions performed in non-nuclear-weapon States should be regulated so as not to permit them to acquire nuclear weapons, but all nuclear-weapon tests -- that is, specifically underground explosions within all signatory countries and performed by any signatory State must be encompassed by the prohibition. The "special international agreement" which I have so far discussed will have to be formulated in such a way that it can take care of an extension of its coverage to nuclear-weapon States also. The technical problem in connexion with control of peaceful nuclear explosions will then be: how can it be ascertained that they are not exploited for military purposes? The handling of the explosive devices as such and also the preparations and installations, particularly those for making diagnostic measurements of the devices, must be submitted to international observation.

37. I must revert, however, to one remark made by Mr. Mulley. I know that several delegations are preoccupied with the same concern. It refers to the very last sentence in article V of the non-proliferation Treaty. Mr. Mulley pointed out what he called "a significant difference of language as the non-proliferation Treaty permits bilateral agreements in addition to 'special international agreement or agreements'". (ENDC/PV.404, para.10)

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38. Our interpretation is quite simple: the "special international agreement" is to provide the overriding regulations on how to handle peaceful nuclear explosions as such -- on foreign territories, as long as we have only the non-proliferation Treaty. Recourse will always be had, on the other hand, to bilateral agreements to settle the conditions for a special project, the modalities, not least the financial conditions, and so on, between a particular nuclear-weapon Power and a particular beneficiary government, altogether free now but only if "pursuant to" the general international rules when they have been settled in the international agreement.

39. I am sorry if this excursion into the field of peaceful nuclear explosions has been a bit time-consuming, but I know that it is a cause of great concern, not to say of some worry, to a number of countries, particularly those underprivileged, so far, economically in a world full of riches.

40. I now have to turn to article II in our suggested text, dealing with control. When introducing this text in the Committeee on 1 April, I said that we did not wish to take a rigid attitude in this matter (ENDC/PV.399, para. 37). Our text was intended as a compromise between the until-now widely different standpoints of the two main Powers, and intended to entice them into coming forward with more precise alternatives than hitherto. The procedure for verification proposed in our text has to be seen and judged as a whole. It is not rewarding to lift out parts of it and say, "Look, this text contains hardly any binding obligations on a suspected party". We, and many others, hold that it does. Paragraph 1, containing a solemn undertaking by all parties to co-operate in good faith to clarify events, is definitely a binding obligation. Paragraph 2, containing an undertaking by all parties to collaborate in an effective international exchange of seismological data, is a binding obligation. To take on that obligation as binding will be in the interests of all parties, considering the mass of valuable information they will obtain in return.

41. On paragraph 3 of article II, dealing with what we have called "verification by challange", the representative of Czechoslovakia, Mr. Lahoda, in his intervention on 29 April asked for:

> "a more detailed explanation of the interrelationship between the provisions of paragraph 3 (b) and 3 (c) of article II and their relationship to paragraph 4 of that article". (ENDC/PV.407, para. 7)

42. Over the years I have several times tried to present this Committee with as succinct a description as possible of the procedure for veritication which has been generally referred to as "verification by challenge". I shall try once again, referring now to the wording in the provisions mentioned by Mr. Lahoda.

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43. We consider it of primary importance that a treaty banning underground nuclear tests should contain provisions by which a party wrongly suspected of having violated the treaty can speedily free itself of suspicion. We hold that this is the main concern in this matter. We have organized such provisions in a three-step series of ascending severity. Under article II, paragraph 3(a), a party is supposed to give explanations. In paragraph 3(b) it is provided that the party might make use of the possibility to invite the suspecting party and/or any other State or some international organ or committee to an inspection of the suspected violation, that inspection to be carried out in a manner which the inviting State itself should prescribe. It may be said, of course, that this is a right which any party to the treaty would have anyway and that it is superfluous to spell out the right in the treaty. We think it is valuable, however: it indicates a speedy and easy way for parties to free themselves of suspicion -- and this is of practical value not least to smaller States.

44. To reply to Mr. Lahoda, there is to my mind no intrinsic connexion between the provision offering that possibility in paragraph 3(b) and the following one in paragraph 3(c), under which the parties are entitled to make additional proposals as to suitable methods of clarification. Paragraph 3(c) is, one might say, a residual category for use of any method of clarification. A demand for an ad hoc inspection in the territory of a suspected party is thus not excluded. I can quite see, however, that this is precisely the focal point of controversy between those who insist on and those who oppose obligatory inspections.

45. Now, as to paragraph 4 of article II, if the various measures indicated in the earlier provisions of that article have failed to clarify a suspicious event to the full satisfaction of a suspecting party, paragraph 4 establishes the right for that party to bring the matter to the attention of the United Nations Security Council and the other parties to the treaty. That formula has been used in other treaties. It is here intended to provide an opportunity for further airing of contested statements about facts. This does not mean, however, that all the measures enumerated in the previous parts of the article, such as the inspection-by-invitation procedure mentioned in paragraph 3(b), need to have been involved. The reporting to the Security Council entails no sanction: the provision is largely of political value. The possibility of a debate in the Security Council may be considered as a kind of safety-valve for a suspected party to state its case and, of course, generally, to give added weight to deterrence.

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46 I have also to deal with one fairly general complaint mentioned by several speakers, namely that the whole machinery we have envisaged is too weak.

47. In his speech on 15 May the representative of Nigeria, Ambassador Sule Kolo, made the plea for what he called "a fool-proof system of verification" (ENDC/PV.411, para.10) At the same time he presented a working paper on the subject (ENDC/246) in which he recommended that the idea raised last year by the United Kingdom delegation for a committee to undertake on-site inspections in suspicious cases should be seriously studied again. The Nigerian delegation recommends in its paper that such a committee should be composed exclusively of non-aligned countries responding to certain criteria.

48. On condition that it was generally acceptable, we would be happy to go along with that idea. However, that is probably not the case. Already in 1962 the non-aligned members of the Eighteen-Nation Committee on Disarmament launched the idea of a special commission to determine and carry out on-site inspections (ENDC/28). For about two years much work in the Eighteen-Nation Committee on Disarmament was devoted to considering such an international commission, but in the final instance it was not accepted.

49. A much more fundamental issue, raised both by Mr. Fisher and Mr. Sule Kolo, is that of verification with or without inspection. Certainly, there cannot be a difference as great as between 100 per cent for one method of deterrence and zero for another. When Ambassador Sule Kolo asked for "fool-proof" verification he knew, of course, that that was a kind of literary exaggeration: nothing like 100 per cent certainty can be foreseen in this world. But even so, we need to know more about how effective on-site inspections are. After all, they depend on achieving precision with regard to epicentre location and quite a set of favourable modalities. The literature on inspections is full of queries and doubts. In our statistical analysis we estimated 50 per cent probability of success. This is a very important question which I address to all proponents of on-site inspections: exactly how efficient are they? Further, what exactly would be the required deterrence level of a treaty with obligatory inspection? In our estimates of capabilities attainable in the future we used the deterrence level of 10 per cent disclosure risk.

50. One of Mr. Fisher's critical remarks in his statement on 8 April was as follows:

> "And what if one finds the explanation of the event unsatisfactory? The violator has, according to the Swedish proposal, no further obligation. Those who consider their security endangered may, of course, withdraw from the treaty,

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but the onus will be on them, not on the violator. That would give the agreement an inherent instability. In fact, any nation that wanted to resume testing openly could just conceivably use such a scheme to force others to abrogate the treaty, rather than do so themselves."
(ENDC/PV.401, para. 28)

51. Clearly, any party not willing to continue with the treaty would have the option of getting out of the treaty through the back door, so to speak, by obstructing the verification process, perhaps even with the onus distribution foreseen by Mr. Fisher. But I think that a treaty with obligatory inspections also offers the same option of backdoor exit, just by obstructing the obligatory on-site inspection procedure. With the obligatory inspection arrangements the occasions for such exits would be even much more frequent than in the arrangement proposed by us. That kind of instability thus exists in both kinds of treaty. I think, however, that any important treaty entered into by mutual agreement would be stabilized in its existence by the mutual interests of the parties, and if those mutual interests were to disappear no treaty would hold.

52. In his important intervention on 8 April, Mr. Fisher also said that one has to test our treaty proposal not only in regard to what is going to happen if false alarms are struck but also in regard to what happens if a violation occurs (ibid., para. 26). Of course, that is so and here I should like again to remark that in our verification-by-challenge process a violator would in reality most probably obstruct co-operation in verification. But that is no different from the case with verification by obligatory on-site inspection. A violator would certainly not permit any such on-site inspection of a violation; he would again simply obstruct the on-site inspection procedure. Or he would disengage himself from the treaty before any verification process was attempted.

53. I hope that in this way I have also given arguments against that part of Mr. Fisher's statement on 8 April where he said: "Obligatory on-site inspections would, we believe, add a sufficiently binding constraint." (ibid., para. 29)

54. I want to add that we were very gratified yesterday when the representative of the United States in his sea-bed treaty proposal (ENDC/249) suggested a verification procedure rather similar to our challenge procedure for the underground test ban (ENDC/PV.414, para. 12 et seq).

55. Let me finally deal with a very important point made by Mr. Mulley. He reminded us (ENDC/PV.404, para. 17) of his proposal from last year allowing for a phasing-out of nuclear-weapon testing by starting with an agreed annual quota of underground test explosions, leading to zero over a small number of years (ENDC/232). The representative of Ethiopia, Mr. Zelleke, in his speech on 10 April suggested that this idea find a

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place in the Swedish treaty text (ENDC/PV.402, para. 106). Our delegation is not at all negative to Mr. Mulley's proposal, if it is acceptable to others, but we do not believe it should be embodied in a major treaty, intended to stand from here to eternity. An agreement about intermediate provisions should rather find its place in some annex or protocol. The adoption of the idea as such would seem to us valuable on condition that the time be used as a warming-up period for the international data exchange and other arrangements for improving verification capabilities. This would give us a cue to the timing problem: prepare the whole structure of the test ban this summer; report to the United Nations on progress made; sign the treaty and/or the transitory regulations when the strategic arms limitation talks are under way; and then start immediately to build up the verification capabilities.

56. The representative of Mexico, Ambassador Garcia Robles, on 10 April made some concrete suggestions as to our method of work which would fit in with such a schedule. He said that available drafts, such as the one contained in our working paper should be considered by the Committee

> "... in a methodical and orderly manner, paragraph by paragraph if necessary. Thus we would in due course be able to transmit to the General Assembly documents which either had received the unanimous approval of the Committee or contained at least a considerable part on which there had been a consensus in the Committee, although there might still exist some differences of opinion on some of the provisions, perhaps even fundamental differences. As regards these last, that is the provisions on which differences of opinion still exist, one could include in parallel columns alternative texts already drafted in the form of articles, or paragraphs of articles, for insertion in the treaty which is being elaborated ...
>
> "In short, we believe that after seven years of general discussion, the time has come to proceed, in regard to various items on our agenda, to the consideration of what in the General Assembly are draft resolutions and in our case should be draft treaties." (ENDC/PV. 402, paras. 33 and 35)

57. I have quoted from Ambassador Garcia Robles' statement at some length because I think it is important and because it so well reflects the views of my delegation on the proper working methods of the Committee, not only on the test ban issue but also on several other disarmament measures ahead of us.

58. Finally, I should like to turn to the representatives of the main nuclear-weapon Powers. Somewhat earlier, I indicated in passing that I would want to pose some major policy questions to them, considering that the controversy hinges on one

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specific point, related to article II, paragraph 3(b) and (c) and paragraph 4 of our paper. First, can we expect to get the position which relies on obligatory inspections spelled out in specific terms and with a scientific background so that a detailed comparison can be made without proposal as an alternative? Secondly, would the co-Chairmen accept the remainder of our draft as a basis for negotiation? The Eighteen-Nation Committee could then proceed with great speed to outline the structure of a comprehensive test ban and report accordingly to the United Nations.

59. I have today quoted from earlier interventions by many of my colleagues. I shall end this lengthy statement with one final quotation to support my basic conviction that a political decision on the comprehensive test ban must be arrived at with great urgency. The quotation I have in mind is intimately related to the test ban issue. It goes back almost six years. It has been taken from an address by the then President of the United States, John F. Kennedy, to the American people on 26 July 1963, after the conclusion of the negotiations in Moscow on the partial test-ban Treaty. This address is reproduced in full in document ENDC/102. President Kennedy wanted to calm those who might find a disarmament agreement risky. He said:

> "But it would be a mistake to assume that this Treaty will be quickly broken.
>
> "The gains of illegal testing are obviously slight compared to their cost and the hazard of discovery, and the nations which have initialled and will sign this treaty prefer it, in my judgement, to unrestricted testing as a matter of their own self-interest, for these nations, too, and all nations, have a stake in limiting the arms race, in holding the spread of nuclear weapons, and in breathing air that is not radioactive. While it may be theoretically possible to demonstrate the risks inherent in any treaty, and such risks in this treaty are small, the far greater risks to our security are the risks of unrestricted testing, the risk of a nuclear arms race, the risk of new nuclear Powers, nuclear pollution, and nuclear war." (ENDC/102, pp.6 and 7)

60. Mr. IGNATIEFF (Canada): I should like to make a very few comments to introduce our working paper (ENDC/251) which has been circulated this morning and is, I hope, before each of my colleagues. I should, incidentally, like to take this

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occasion to thank the co-Chairmen for their courtesy in permitting me to follow the representative of Sweden, who has just made a most interesting and important statement. In doing so the co-Chairmen have maintained the very high standards of courtesy which have made this session so agreeable.

61. My colleagues will recall that I outlined the Canadian proposal on this subject at our informal meeting on Wednesday, and therefore I shall not impose upon their time now with a lengthy repetition of what I said then about the background. I should, however, like to stress again that this proposal is in no way intended to prejudice discussions on any other proposals on the comprehensive test ban which are now before the Committee.

62. The paper itself is, I think, more or less self-explanatory and I therefore wish to mention only two points. First, we have suggested that the Secretary-General be designated as the recipient of the information that we requested, simply because his office represents the most relevant permanent address to which States can respond to our request, whether or not the Eighteen-Nation Committee on Disarmament is in session. Second, our authorities, our specialists, have told us that all the technical information which is requested in the paper is necessary for a proper assessment, eventually, of what would be required to constitute an effective world-wide exchange of seismological data.

63. We do hope that other delegations will agree that this proposal is in line with the step-by-step approach through which it seems to us that our present difficulties with a comprehensive test ban might begin to be overcome and to which the representative of Sweden has made such a notable contribution today. We also hope that delegations will study our paper during the recess and will come to a favourable decision, so that on our return the proposal may be accepted and this action may be reflected in our report to the next session of the General Assembly as constituting evidence that the Committee is carrying out the urgent mandate given to it on this important matter.

64. In fact, if the Eighteen-Nation Committee on Disarmament adopts a positive attitude to this idea, the next session of the United Nations General Assembly might be asked to pass a resolution approving of this action and calling for the co-operation of States to improve and intensify international co-operation in the exchange of seismological data.

65. Mr. FISHER, (United States of America): Today we are concluding the formal work of the spring session of this Committee. I think that this session has once again proved the worth of this Committee to the international community and to world peace.

66. The views of my own Government, as the Committee may recall, were expressed by President Nixon in his letter of 15 March to Ambassador Smith when he said: "A major part of the work of peace is done by the Eighteen-Nation Disarmament Committee" (ENDC/239,* p.2).

67. In a moment I shall discuss the foundation which our work this session has laid for possible accomplishments in the session to be held this summer. But first I should like to take a longer view. And in this connexion I would refer to the interesting thoughts raised on the working paper presented by Deputy Foreign Minister Zagari on 21 April (ENDC/245). We believe that it would indeed be a healthy exercise for this Committee to take stock of itself, to consider how much we have accomplished so far towards reaching our long range goals. I am not suggesting that we should begin anew discussion of detailed treaty texts on general and complete disarmament. I do believe, however, that we might well give some fresh thought to where we stand with respect to our longer-range objectives. This would doubtless help us view the specific measures we have under consideration not as isolated measures, but as well-ordered steps to our ultimate goal. The Italian working paper raises this point when it asks the pertinent question: are we carrying out the purposes for which our Committee was formed? It also suggests an approach which might lead to an affirmative response to that question.

68. I should now like to turn to the specific measures which have been discussed at our spring session, now concluding.

69. The United States has listened with interest to the views expressed on the subject of chemical and bacteriological warfare. In particular, we have noted the proposals made by Mr. Mulley (ENDC/PV.404, paras. 24 et seq.) and by the representative of Sweden (ENDC/PV.397, para. 99) to make more binding, or even extend, the restrictions of the Geneva Protocol. The United States supports the principles of the Geneva Protocol and has frequently noted its commitment to respect

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them. We expect that the Secretary-General's report on this subject will provide a basis for us to make further judgments on the feasibility and practicability of these proposals and those suggested by others. We would hope that a constructive discussion of this subject could be pursued during our next session after the report of the experts has been submitted.

70. On 18 March, at the opening meeting of this session, the United States reaffirmed its interest

> "in working out an international agreement that would prohibit the emplacement or fixing of nuclear weapons or other weapons of mass destruction on the sea-bed" (ENDC/239*, p. 1).

The United States recently submitted a draft treaty on this subject (ENDC/249). Since we spoke on the subject at some length at our meeting yesterday (ENDC/PV.414, paras. 2 et seq.), I do not propose to deal with it in any greater detail now, other than to point out that in the view of the United States it is a realistic approach to the sea-bed problem. I should also like to point out that we included in this proposal a review clause which recognizes that the science of "oceanology" is in its infancy and that our knowledge of this environment and our capability to function in it will increase.

71. As I have indicated, the United States proposal would deal with the most urgent issue, which we believe to be the danger of the emplacement of nuclear weapons on the sea-bed. It extends the area of prohibition to the maximum possible extent. With respect to verification it offers the advantage of using existing rights currently enjoyed by all States, combined with consultations to resolve difficulties arising from the exercise of these rights.

72. I note that today the representative of Sweden referred to this matter, gently but unmistakably, by asking: if this type of consultation is good enough for the sea-bed, why is it not good enough for something else? That is a good question, but I think there is a ready answer -- namely that the sea-bed, a regime open to all men under the regime of the freedom of the seas, is really quite different from the interior of a country where no such regime applies. In dealing with the sea-bed, we are really dealing with quite a fortunate situation. Existing international law guarantees the freedom of the seas to all and the right to observe what goes on there. This right, of course, does not exist on land. The possibility of

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significant events in violation of a treaty occurring on or under the sea and escaping detection by someone is small, while the possibility of significant events in violation of a treaty occurring deep within the boundaries of a country and escaping detection by those who can look with only indirect and less than certain means is undoubtedly not small.

73. I believe I indicated yesterday the view of the United States that if a country were to sign a sea-bed treaty and were to be tempted to violate it, it would probably not do so by means of one installation; rather it would probably do so on a rather massive scale -- a scale that might affect the balance of power (ibid., para. 12), so we have the problem of what sort of a risk one is concerned about. I submit that this does not apply to the case of a test ban -- a treaty that is designed to remain in force for a long time. A country that had stopped testing entirely might well feel that a single test a year, or two a year, by a potential adversary could present a real threat to its security as the treaty continued in force. It would certainly present an area of instability. I think it is worth while noting, in this context, that in one of the very interesting studies made by the Swedish Government the evasion rate was hypothesized as one test a year, it being realized that that might be a cause of significant concern.

74. It is true that the United States verification procedure for the sea-bed does not provide for access to the installations, for the overwhelming physical reasons which I mentioned (ibid., para. 14) in introducing our proposal. However, as I pointed out yesterday, certain observable physical characteristics would furnish the necessary clues to the possible function of the installation and, as I stated earlier, a possible violation would probably involve a great deal of activity. In other words, in the environment of the sea-bed, once one has looked at an installation and has the right to consult, one does not really get much further by knocking on the door at a depth of, say, one thousand feet and demanding to be let in. I submit that quite the opposite is the case with the on-site inspection. I dealt with the problem of the modalities of an on-site inspection in a speech in April 1966 (ENDC/PV.254, pp. 19-23). I think that, while we have since then learned a good deal more on the subject, there is nothing we have learned that would disprove anything that might be learned because of the presence of gases and a variety of other things, which would make an on-site inspection useful. For that reason I think that the two environments -- underground within the territory of a State, and the sea-bed under an international régime -- are quite different.

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75. That brings us to the test ban. I should like to turn my attention to it, briefly, and to the proposals for a comprehensive test ban, in particular to the verification issue.

76. President Nixon in the letter which Ambassador Smith read to this Committee stated that:

> "... the United States supports the conclusion of a comprehensive test ban adequately verified. In view of the fact that differences regarding verification have not permitted achievement of this key arms control measure, efforts must be made towards greater understanding of the verification issue." (ENDC/239*, p.2)

77. In my intervention of 8 April I emphasized that in our view adequate verification required obligatory on-site inspection in addition to seismic detection and identification techniques. I indicated our view that this position was based on a firm amalgam of political and scientific considerations (ENDC/PV.401, para. 19).

78. At this session considerable emphasis has been placed upon the relationship of seismic data exchange to a comprehensive test ban. I should like, therefore, to elaborate on our approach to this matter.

79. The United States believes that seismic data exchange would serve as a useful complement to an adequately verified test ban. However, if we are to form a judgment on the role of seismic data exchange in a test ban, then we must examine and judge seismic data exchange as it is today and as we can foresee it.

80. In her very interesting remarks this morning the representative of Sweden directed some observations towards the United States, and that was quite proper. I think it would probably be unwise -- although we have been engaging in quite a free exchange, and I think it is good that we have done so -- for me to attempt to reply ad lib, so to speak, to all of them. I think we shall accept in regard to many of them her invitation to supply information for the record at the forthcoming session. However, as we customarily say in this body, I do have some preliminary thoughts on some of her observations, in the context of the subject I am now discussing -- that is, data exchange.

81. The Brooker and Mitronovas study, relied upon to support the proposition that a comprehensive test ban could or might be verified without on-site inspection by seismic means alone and utilizing seismic data exchange, was based on an analysis influenced by the following factors: (a) the tests and earthquakes were in the United States; (b) the observation of the seismic events created by both of these events was made by advanced seismic stations in the United States, operated by United States employees; (c) the seismic stations were very close -- I think within 1,500 kilometres -- to the events observed; and (d) the events occurred in an area where the geological

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characteristics were quite well known -- we have been living there for a hundred years or so and we know the geology of the area fairly well. In addition, while the Brooker and Mitronovas study did include some smaller-yield events, these were not factored out, so to speak, to take into account the magnitude gap which the SIPRI report (ENDC/230) has brought to our attention.

82. The problem of the magnitude gap clearly is in all our minds if we are thinking of teleseismic means and, perhaps, to some degree of regional seismic data. But before even considering the assumptions as to the probability or ratio of detection serving as an adequate deterrent when that detection was only by seismic means and by the interesting but highly sophisticated game theory and, indeed, before considering the political stability of this type of highly technical information serving as a deterrent -- before we even get to those questions -- we shall have to have a very clear idea whether the quantity and quality of the data we would get from a seismic data exchange would be of a similar quality to data secured from United States stations on United States territory, run by United States employees and watching United States tests and United States earthquakes, all of which we know a good deal about for other reasons. Suffice it to say that as of now nothing that we have seen in the study gives us any reason to believe that seismic data exchange would eliminate, on scientific and technical considerations, the need for on-site inspections. We believe that ambiguous seismic events would still remain even with the seismic data exchange. However, the fact that the most hopeful study was based on regional seismic data means that, if we are to be serious in our work, we cannot accept the view which has been expressed here that seismic data exchange is only something to be examined and entered into after we have achieved a comprehensive test ban. It seems to me that the very fact that an interesting study put forward for the consideration of this Committee was based on regional seismic data of a high quality automatically raises a question which every one of us ought to be asking himself: Should we not, in considering these suggestions, know what seismic data we would get out of a seismic data exchange?

83. The representatives of Canada (ENDC/PV.404, paras. 82 et seq.) and the United Kingdom (ibid., paras. 13 et seq.) have addressed themselves to an analysis of the technical issues that are raised if seismic data exchange is to be effective. The representative of Canada proposed as a preliminary step that those countries which

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would be willing to participate in a seismic data exchange should submit a list of their seismic stations, together with appropriate technical information, in order to foster movement towards merging existing seismological networks into a world-wide data exchange system (ibid., para. 89). Today an interesting statement has been made by the representative of Canada and we are fortunate to have in front of us a working paper dealing with the subject (ENDC/251). We shall certainly study this paper with the greatest interest and hope to be able to make appropriate comments on it during our next session.

84. In response to the earlier Canadian proposal, I should indicate that the United States is quite prepared to make available to the Eighteen-Nation Committee on Disarmament a list of seismic stations in the United States from which we would be ready to supply records in a world-wide exchange of data. We would all agree, however, that there is still much to be learned in the field of detection and identification of seismic events.

85. As part of this learning process, on 25 March (ENDC/PV.397, paras. 23-25) Ambassador Smith restated a seismic investigation proposal that had originally been put forward in the United Nations General Assembly by Mr. Foster (A/C.1/PV.1630, provisional, pp.18-20). Ambassador Smith stated that in the course of this year there were two possible nuclear experiments in the United States Atomic Energy Commission's "Plowshare" programme that could be used in implementing this seismic investigation proposal.

86. Today I should like to submit a working paper (ENDC/252) which elaborates on one of those experiments and on our plan for implementing the seismic exchange proposal. This experiment, which goes under the code name of Project Rulison, will be conducted in the state of Colorado in the western United States. Originally scheduled for the latter part of this month or perhaps for June, the experiment has now for technical reasons been postponed until September.

87. The working paper describes the implementation of our seismic investigation proposal with respect to Project Rulison. All that data will be available to all interested States and organizations, which will be able to analyse the data. Each State can derive for itself the benefits of those analyses. The results of this experiment and, we hope, others in the future, can then be discussed in relevent scientific and technical forums. This analysis of that experiment should enable

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the seismic investigation proposal to facilitate further advancement in seismic technology and increasing international exchange of information in this field. Furthermore, we shall have here a concrete example of co-operation in seismic data exchange, which will undoubtedly serve as some measure of the possible usefulness of seismic data exchange to provide progress in this field.

88. I should now like to make a brief observation regarding the cut-off in the production of fissionable materials for weapons purposes, a measure strongly supported by the United States. We have been deeply gratified by the positive remarks concerning that measure which were made by many delegations in this Committee.

89. The United States suggestion for verifying a cut-off, as revised on 8 April (ENDC/PV.401, paras. 7 and 8), involves applying the same standards to the nuclear-weapon States as have been agreed to be appropriate for the non-nuclear-weapon States in the non-proliferation Treaty. It is therefore clear that objections as to the means of verification are no longer valid as a reason for objecting to the cut-off.

90. The United States has given priority to a cut-off agreement for many years because it is a realistic measure that would limit once and for all the amount of nuclear materials available for weapons purposes, and that means it would limit the number of nuclear weapons because nuclear material is obviously an essential ingredient. This would be of clear benefit to nuclear- and non-nuclear-weapon States alike from the standpoint of their security, not to mention the benefits it would bring economically and as a confidence-building measure.

91. In conclusion, I should like to say that, while the issues before us are complex, we have had a most useful session. I believe we have laid the groundwork for more concrete achievements during the summer session.

92. I should like to express the thanks of the United States delegation to the Special Representative of the Secretary-General and the Deputy Special Representative of the Secretary-General for the valuable work they have done. I should also like to express our appreciation, and my personal appreciation, to the various officials, both seen and unseen, who are essential to the work of this Committee, particularly the interpreters who have carried out so well the difficult task of interpreting colloquial, ungrammatical and too-rapidly-spoken not-quite-English of this speaker into the other official languages of this Committee.

93. Mr. ROSHCHIN (Union of Soviet Socialist Republics) (translation from Russian): Today the Eighteen-Nation Committee on Disarmament comes to the end of this session. Various proposals relating to the solution of disarmament questions have been submitted to the Committee, and numerous considerations have been put forward regarding what the Eighteen-Nation Committee on Disarmament could do in the first place in order to make progress towards achieving agreement on those questions. The main attention of the Committee has been devoted to problems relating to prohibition of the military use of the sea-bed, prohibition of the use of nuclear weapons, the cessation of nuclear weapons tests, and chemical and bacteriological weapons.

94. The question most widely discussed at the present session of the Committee was that of prohibiting the military use of the sea-bed. The discussion that took place has enabled us to draw the following conclusions. First of all, it should be noted that all delegations actively participated in the discussion and emphasized the need to implement effective measures to prevent the spread of the arms race to the sea-bed and the ocean floor. The broad understanding which emerged in the Committee of the importance of banning the use of the sea-bed for military purposes is a positive factor, which makes it possible to hope that our Committee will be able to elaborate for the achievement of that aim a concrete solution that meets the interests of strengthening international security and co-operation. Of course, such a solution can only be elaborated if all members of the Committee strive to seek constructive decisions.

95. We also note that the basis of the discussion that developed at this session was the draft treaty on prohibition of the use for military purposes of the sea-bed and the ocean floor and the subsoil thereof (ENDC/240) submitted by the Soviet delegation. A number of delegations expressed their support of the main principles underlying the Soviet draft treaty. In particular, wide support was given to the idea that the scope of the prohibition should be as large as possible, that the geographical area to be covered by the treaty should be as wide as possible and that the principles for defining its limits should not be linked to the existing limits of national jurisdiction. We regard the support given by many delegations to the main provisions of the Soviet draft treaty as another positive factor which opens up real prospects of achieving agreement on this question.

96. At the same time we cannot but point out that during the discussion considerable differences emerged in regard to the scope of the ban, which is the most important aspect of the future treaty. The representatives of the Western Powers, primarily those of the United States and the United Kingdom, oppose a complete ban on military activities

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on the sea-bed while showing a readiness to agree to prohibit only the emplacement there of weapons of mass destruction.

97. That position was reflected in the draft treaty on this subject submitted yesterday by the United States delegation (ENDC/249). The Soviet delegation is studying that draft and obviously, at the appropriate time, will express its views on the provisions contained therein. But I should like in a preliminary way to draw attention to the fact that many delegations have already pointed out that it is insufficient to restrict ourselves to a ban on the emplacement on the sea-bed of only weapons of mass destruction.

98. In adducing arguments in favour of their position, the representatives of the Western Powers allege that their proposal is the only realistic measure which can be implemented in order to prevent an arms race on the sea-bed. They state that a partial ban would facilitate the solution of problems of verification and would meet to a greater extent the interests of the security of coastal States. The position from which such arguments derive is an attempt to draw a distinction between offensive and defensive weapons and on that basis to prove the necessity of continuing certain types of military activity on the sea-bed.

99. We cannot agree that the legitimation of certain military activities on the sea-bed would not result in the development of an arms race there, whatever may be the arguments on which that view is based. The conclusion of an agreement banning only certain types of military activity on the sea-bed and the ocean floor would result in a situation where other kinds of activities not covered by this ban would be legitimized, and that would mean that the sea-bed and the ocean floor would become a new sphere of rivalry between States. Should only weapons of mass destruction be prohibited on the sea-bed and the ocean floor, as proposed by the delegation of the United States, there would still be the possibility of the development of a conventional arms race in that environment.

100. As to the attempts to draw a distinction between offensive and defensive weapons, that distinction is very relative because the so-called defensive weapons can be used for aggressive purposes.

101. In summing up the discussion at the present session of the Eighteen-Nation Committee of a ban on the military use of the sea-bed and the ocean floor, we should like to emphasize that in spite of the existing differences on certain aspects of this problem the aforementioned broad understanding of its importance is an encouraging factor which

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leads us to expect that during the forthcoming summer session of the Committee more persistent steps will be taken with a view to arriving at a constructive solution. If delegations show sufficient good-will in the search for mutually acceptable decisions, the Committee will be in a position to report to the twenty-fourth session of the United Nations General Assembly on the positive results of our work in that field.

102. We should like to emphasize once again that the conclusion of a treaty banning the use for military purposes of the sea-bed and the ocean floor would contribute to a relaxation of international tension, would exclude vast areas of the globe from the sphere of the arms race and would create additional preconditions for the peaceful utilization of the sea-bed.

103. During the session considerable attention was given to questions of nuclear disarmament. The Soviet delegation considers that among those questions the one most ripe for solution is the question of prohibiting the use of nuclear weapons. The implementation of that measure would outlaw nuclear weapons and would pave the way for further steps in the field of nuclear disarmament. The delegations of the socialist countries and those of a number of non-aligned States have expressed themselves at this session as being in favour of prohibiting the use of nuclear weapons.

104. Thus, the representative of Bulgaria, Ambassador Christov, stated:

> "The Bulgarian Government has always warmly supported and continues to support the idea of concluding a convention to that end as quickly as possible. We consider that such a convention would have a vast repercussion on the international situation and would contribute to creating a favourable climate for all the discussions on disarmament." (ENDC/PV.406, para.38)

105. In dealing with the question of concluding a convention to prohibit the use of nuclear weapons, the representative of India, Ambassador Husain, said:

> "India has always supported the idea of such a convention ... We do feel that, like other declaratory prohibitions in the past, such a convention could have a considerable moral and psychological value, and its conclusion need not await other agreements on nuclear disarmament." (ENDC/PV.404, para.64)

106. At the same time it should be pointed out that the Western States oppose the prohibition of the use of nuclear weapons. In that connexion we should like to note that we have not yet received a reply from the delegations of the United States and the United Kingdom to the question whether their own proposals put forward in 1957 (DC/113, annex 5) and 1962 (A/5174, annex II) still stand, proposals that nuclear weapons should not be used with aggressive intentions and that they should be used only

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for purposes of self-defence. Is this not an indication of the fact that the Western Powers are endeavouring to avoid a discussion of this question in our Committee?

107. Another problem of nuclear disarmament which was considered during the present session was that of the prohibition of underground nuclear weapon tests. The Soviet Union has for many years been advocating a comprehensive ban on all nuclear weapon tests. The Soviet Government has repeatedly declared its readiness to reach agreement on the prohibition of underground nuclear tests on the basis of the use of national means of detection and to conclude for that purpose a special international agreement.

108. The solution to the problem of outlawing all nuclear tests meets with the opposition of the Western Powers, which put forward the far-fetched pretext that international on-site inspections are necessary for control over the observance of an appropriate agreement. The demands for the carrying out of such inspections are shared neither by many members of our Committee nor by the scientists of a number of countries. That is also evidenced by the considerations put forward by the Swedish delegation at the present session on the question of banning underground nuclear tests. The Swedish delegation pointed out that the need to resort to inspection, by invitation, with a view to identifying an ambiguous seismic phenomenon may arise less than once in a decade (ENDC/PV.399, para.19). Such a statement of the question shows very convincingly that the demand for international inspection to verify a ban on underground nuclear weapon tests does not rest on solid ground. We are firmly convinced that for control over the observance of the cessation of nuclear tests no international inspection in any form is required.

109. The Swedish delegation introduced a working document which sets out the basic principles of a comprehensive nuclear test ban treaty (ENDC/242). The Soviet delegation has already noted the positive aspects of the Swedish draft and indicated (ENDC/PV.402, para.72) that the Soviet Union is prepared to exchange seismic information with other countries within the framework of the "detection club" proposed by Sweden (ENDC/154).

110. At the same time the Swedish working paper contains a number of provisions which cannot fail to give rise to objections. While recognizing the adequacy of seismic means of verifying an agreement on the total prohibition of nuclear weapon tests, at the same time it includes, in point of fact, the principle of the carrying out of international on-site verification under the guise of inspection on invitation. There

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is no need for this provision since, as the Swedish delegation itself recognizes, national means of detection are adequate to reveal possible violations of a treaty on the complete prohibition of nuclear tests.

111. One cannot fail to note also that in the Swedish working paper the question of carrying out nuclear explosions for peaceful purposes is resolved in such a way that until a special agreement is concluded such explosions are excluded, whether undertaken for the nuclear countries themselves or on the basis of bilateral agreements -- which is contrary to the non-proliferation Treaty (ENDC/226*).

112. Unfortunately, we must observe that the negative position taken by the United States delegation in regard to any proposals for the prohibition of underground nuclear testing if they do not include a provision for compulsory on-site inspection hampers progress towards the solution of this problem. If the United States side continues to maintain this demand as an obligatory condition for the discontinuance of underground nuclear tests, all efforts by the members of the Committee to solve this problem will prove unavailing.

113. Among the problems raised during the present session the Soviet delegation regards the question of chemical and bacteriological weapons as important and urgent. Because of their capability to kill living organisms, chemical and biological weapons are amongst the most deadly means of mass destruction. The use of gases and poisonous substances compelled the nations to take measures to prevent their use in the future. As a result, the Geneva Protocol of 1925 for the Prohibition of the Use in War of Asphyxiating, Poisonous and Other Gases and of Bacteriological Methods of Warfare was elaborated. This agreement has been of great importance in preventing the use of chemical and bacteriological means of warfare. It has obtained wide international recognition. At present almost sixty States are parties to the Protocol.

114. In recent times the attention given by world public opinion to the problem of bacteriological and chemical weapons has increased considerably. This was reflected in General Assembly resolution 2162B (XXI) (ENDC/185) which, having defined chemical and bacteriological weapons as weapons of mass destruction, confirmed that these weapons "constitute a danger to all mankind and are incompatible with the accepted norms of civilization". The General Assembly called for "strict observance by all States of the principles and objectives" of the Geneva Protocol of 1925 and condemned "all actions contrary to those objectives". The General Assembly invited all States to accede to the Protocol. The Soviet Union bases itself on the premise that the Geneva Protocol is an

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important international document which has played and is still playing a vital role in the fight against the use of chemical and bacteriological weapons.

115. Taking into account the threat presented by chemical and bacteriological weapons, the Soviet Government has suggested, as indicated in the memorandum of 1 July 1968 on some urgent measures for stopping the arms race and for disarmament (ENDC/227), that the Eighteen-Nation Committee on Disarmament should consider ways and means of securing the observance of the Geneva Protocol by all States.

116. The task of our Committee is to facilitate the accession to the Geneva Protocol of those States which so far have not acceded. This would contribute to solving the problem of excluding bacteriological and chemical weapons from the life of the community. The Soviet Union, basing itself on its position of principle on disarmament questions, advocates the complete prohibition of chemical and bacteriological weapons.

117. In this connexion we should like to call the attention of the Committee to the statement by which Soviet scientists recently appealed to the scientists of all continents and countries. In their message they called for a struggle against the manufacture and stockpiling of chemical and bacteriological weapons, and for the prohibition of their manufacture. They demanded the outlawing of these types of weapons.

118. In reviewing the discussion that has taken place at this session on the question of chemical and bacteriological weapons, we are gratified to note that virtually all delegations were in favour of ensuring the adherence to the Geneva Protocol of 1925 of the largest possible number of States, and in favour of strengthening this Protocol. In this connexion we may refer to the statement made by the representative of Sweden, Mrs. Myrdal, who said on 25 March that: "The Eighteen-Nation Committee must outline how to strengthen the 1925 Geneva Protocol by securing wider adherence to it." (ENDC/PV.397, para.99)

119. A different approach to this problem is proposed by the United Kingdom delegation. The United Kingdom position, as set forth in working paper ENDC/231, is based on the assumption that the Geneva Protocol is not a fully satisfactory document, and for its "improvement" it is proposed to separate the question of biological weapons from that of chemical weapons and to deal in the first place with the problem of biological weapons. As has been pointed out by many representatives, the separation of these questions would not lead to the strengthening but to the undermining of the Geneva

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Protocol and would not contribute to the solution of the tasks entrusted by the United Nations General Assembly to the Eighteen-Nation Committee.

120. A positive factor of the present session is that a number of delegations, including those of Mexico, Sweden, Ethiopia, India, Brazil and Romania, have advocated more specific negotiations than have taken place recently on general and complete disarmament. The Soviet delegation is of the opinion that the existing world situation urgently imposes the need for a business-like discussion of this problem. The Soviet side has put forward proposals both for an all-round solution of the question of general and complete disarmament -- I have in mind the relevant Soviet draft treaty (ENDC/2/Rev.1 and Corr.1) -- and also for partial measures in the field of limiting the arms race and lessening international tension, as set forth in the Soviet memorandum of 1 July 1968. The Soviet Government, in putting forward the task of accomplishing individual partial measures, was guided by the fact that these should in the last analysis lead to general and complete disarmament.

121. In this connexion we still regard as an important task of the Committee the making of progress in the search for agreement on such questions as the elimination of foreign military bases, the prohibition of bomber aircraft flights with nuclear weapons aboard beyond national borders, regional disarmament measures, and so on.

122. One of the most urgent tasks is to ensure the speedy entry into force of the non-proliferation Treaty. The Soviet delegation fully shares the endeavours of the members of the Eighteen-Nation Committee to impart to that Treaty a universal character and thus contribute to the strengthening of international peace and security. We deem it necessary to draw the attention of the members of the Committee to the fact that a few days ago the USSR Council of Ministers submitted the Treaty on the Non-Proliferation of Nuclear Weapons to the Presidium of the Supreme Soviet of the USSR for ratification.

123. While taking specific steps for the ratification of the non-proliferation Treaty we should also like to observe that we share the concern of a number of delegations at the fact that some States which are close to manufacturing their own nuclear weapons have not so far signed this Treaty.

124. In endeavouring to make progress in solving disarmament questions it is necessary to recall that there are active forces in the world which are interested in the arms race. The building-up of military arsenals in quantity and quality is going on and the activities of the aggressive military blocs are being intensified. The Government of the Soviet Union and the governments of the other socialist countries have repeatedly

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called attention to the danger inherent in a race in nuclear and other types of weapons and have put forward concrete proposals aimed at making mankind safe from the threat of a new war.

125. Now that we are interrupting for a brief period the meetings of the Eighteen-Nation Committee, we express the hope that this recess will be used by the States members of the Committee for the purpose of seeking constructive solutions which could be adopted by the Committee and reported to the next session of the United Nations General Assembly. The Soviet delegation will exert every effort to arrive as soon as possible at mutually acceptable solutions in regard to the questions that have been discussed in this Committee.

126. In conclusion the Soviet delegation would like to thank the Special Representative of the Secretary-General, Mr. Protitch, his Deputy, Mr. Epstein, and all the staff of the Secretariat, including the interpreters, for the highly skilled assistance which they have rendered to the Committee during the disarmament negotiations.

127. Mr. HUSAIN (India): At our meeting on 17 April my delegation welcomed the initiative taken by the Minister of State of Sweden in submitting for the consideration of the Committee possible provisions of a treaty banning underground nuclear weapon tests (ENDC/242) and I then expressed our general views about the basic principles involved (ENDC/PV.404, paras.61-63). Today I wish to comment on two aspects of a comprehensive nuclear test ban which have been the subject of much discussion among us recently.

128. The first concerns the question of intensifying co-operation for an international exchange of seismological data. While we do not believe that the conclusion of a comprehensive test ban should await the perfectioning of seismic detection and identification techniques, my delegation welcomes the statements made by the representatives of the United States (Supra, para.84), the United Kingdom (ENDC/PV.396, para.27) and the Soviet Union (ENDC/PV.402, para.72) offering the co-operation of their respective countries in seismological data exchange. This is a significant step forward, and we for our part shall continue to lend our support, as we have already done in connexion with the deliberations of SIPRI. My delegation is of the firm view that the idea of seismological data exchange for detection purposes in an underground nuclear test ban treaty has come to stay, and we should like to place on record our appreciation of the initiative and the continuing efforts made in this regard by the Government of

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Sweden. We have heard this morning the representative of Canada present some suggestions for an organized and effective world-wide exchange of seismological data. We warmly welcome that initiative and shall give the Canadian suggestions the most careful consideration in consultation with our experts.

129. The second aspect of a comprehensive test ban with which I propose to deal today concerns the question of nuclear explosions for peaceful purposes. In my statement of 13 August 1968 I said:

> "... when we are legislating for the international community on a long-term basis some provision will have to be made for nuclear explosions for peaceful purposes. That question is logically and directly linked to that of a comprehensive test-ban treaty. It should be considered in conjunction with a comprehensive test ban and not separately from it." (ENDC/PV.389, para.15)

130. There are two equally important aspects of the question of nuclear explosions for peaceful purposes. There is the economic aspect and there is also the disarmament aspect.

131. In the development of peaceful nuclear technology, nuclear explosions for peaceful purposes occupy a very important place and might become, perhaps, the most significant instrument for the economic development of developing countries. There should be neither any monopoly nor any discrimination in regard to the development of the technology of nuclear explosions for peaceful purposes. We must avoid doing anything which might further widen the gulf between the rich and the poor nations or introduce a new and serious element of international friction and discontent.

132. The disarmament aspect of the question of nuclear explosions for peaceful purposes requires a complete stoppage of all nuclear explosions with a view to putting an end to the nuclear arms race. We in this Committee are at present engaged in specifically and directly dealing with that aspect. It has to be ensured that nuclear explosions for peaceful purposes are not misused in any manner for military purposes and that they do not contribute to a further aggravation of the nuclear arms race.

133. The partial test-ban Treaty of 1963 (ENDC/100/Rev.1) was intended to be the first step in slowing down the nuclear arms race. However, it has been successful only to a limited extent, as not all nuclear-weapon States have yet become parties to it. Of no less significance for the continued intensification of the nuclear arms race has been the continued underground nuclear testing, although the international community has repeatedly called for an underground nuclear test ban. The discipline of a comprehensive nuclear test ban, to be meaningful, should therefore be total and absolute, and there

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should be no loopholes in it. It will be effective only if the ban applies equally to all States, including all nuclear-weapon States, without exception.

134. To deal thereafter with the economic aspect which I mentioned earlier, a separate international agreement would need to be negotiated for regulating the conduct of nuclear explosions for peaceful purposes. Such an international agreement would of necessity have to cover several matters. For example, it would have to legislate the purposes for which explosions would be permitted and lay down the conditions under which they could be conducted. It would have to provide the necessary safeguards from the point of view of health and safety requirements. It would have to define the roles of various international agencies like the International Atomic Energy Agency and the World Health Organization. It may be pointed out that none of these aspects is dealt with in any existing international instrument, such as the partial test-ban Treaty and the non-proliferation Treaty (ENDC/226*), nor indeed could one expect them to be provided for within the body of an underground nuclear test ban treaty.

135. Taken all together, these various matters would require a whole complex of rules and regulations laying down and governing an international regime of nuclear explosions for peaceful purposes. It is then clear that for the establishment of such a regime a separate, self-contained and comprehensive international agreement would be indispensable. In this connexion my delegation has noted with appreciation the views expressed by the representative of Brazil on 8 May (ENDC/PV.409, paras.10-12).

136. Several delegations have raised the question of the relationship of article V of the non-proliferation Treaty with article I, paragraph 3 of the Swedish draft of an underground nuclear test ban treaty (ENDC/242). It may be recalled that article V of the non-proliferation Treaty seeks to ensure the availability not of existing but of "potential benefits from any peaceful applications of nuclear explosions" to non-nuclear-weapon States, and those potential benefits, as and when they become feasible, are to be made available through a special international agreement or agreements, or bilateral agreements, which would have to be negotiated and concluded in the future so as to provide for appropriate international observation and procedures. It will be seen, therefore, that article V of the non-proliferation Treaty is only an enabling provision, and no more than an enabling provision, for a specific and limited purpose. Similarly, article I, paragraph 3 of the Swedish draft constitutes an enabling provision by stating that explosions for peaceful purposes may be carried out "in conformity with an international agreement to be negotiated separately". That enabling provision of the

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Swedish draft is also given support by a declaration of intent in the last preambular paragraph, which states that parties to the treaty intend "to conclude, at the earliest possible date, a separate international agreement regarding nuclear explosions for peaceful purposes". Thus, it is clear that the conduct of nuclear explosions for peaceful purposes has to be authorized under an independent international agreement to be negotiated and concluded separately. It is, further, clear that the international agreement contemplated in the Swedish draft is more basic in purpose and broader in scope than what is referred to in article V of the non-proliferation Treaty. Nevertheless, one cannot prejudge or prejudice the other.

137. In our discussions concerning nuclear explosions for peaceful purposes, apprehension has sometimes been expressed that if the conduct of such explosions were to be linked -- as in our view would be logical -- to a comprehensive nuclear test ban, which might still take some time to achieve, would it not mean that there would be a certain hiatus or time-lag in the availability of potential benefits from nuclear explosions for peaceful purposes, which have been provided for under article V of the non-proliferation Treaty? In answer, one might point out that all the possible benefits of nuclear explosions for peaceful purposes have not yet become imminent. We have heard several statements on that subject from the co-Chairmen, and one could reasonably hope that these benefits would in fact become available by the time a comprehensive test ban is achieved. One thing, however, is clear. There should be no piecemeal modification or whittling down of the partial test-ban Treaty to provide for peaceful nuclear explosions. The discipline of the partial test ban Treaty should be observed and such modifications as are necessary should be conceived of only as an integral part of a comprehensive international agreement on peaceful explosions, because on no account are we willing to accept a position under which nuclear explosions for peaceful purposes would in the years to come become the monopoly of nuclear-weapon Powers alone.

The Conference decided to issue the following communiqué:

"The Conference of the Eighteen-Nation Committee on Disarmament today held its 415th plenary meeting in the Palais des Nations, Geneva, under the chairmanship of H.E. Ambassador Afework Zelleke, representative of Ethiopia.

"Statements were made by the representatives of Sweden, Canada, the United States of America, the Union of Soviet Socialist Republics and India.

"The delegation of Italy submitted a working paper containing additional suggestions on underground nuclear explosions (ENDC/250) following the Italian working paper (ENDC/234) of August 1968.

"The delegation of Canada submitted a working paper on the comprehensive test ban (ENDC/251).

"The delegation of the United States of America submitted a working paper on seismic investigation proposals (ENDC/252).

"The next meeting of the Conference will be held on Thursday, 3 July 1969, at 3.30 p.m."

The meeting rose at 12.20 p.m.